## **COMMERCIAL PLAN REVIEW**

| -       | ct Title Date  |  |
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| Address |  |  |
| Appli   | cant Information   |  |
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| BUILL   | DING PLAN REVIEW. Reviewed by Matt Hart 810-655-4631 ext.235   |  |
|         | The building code currently in effect is the 2012 Michigan Building Code edition (MBC 2012).   |  |
|         | The signing and sealing of the construction documents shall be in accordance with all the codes, PA 230 and PA   |  |
|         | 299. The preceding code and PA references defines the person responsible for signing and sealing the   |  |
|         | construction documents as having the knowledge and educational background to design those structures,  |  |
|         | elements and systems that they are signing and sealing. It is uncommon in the industry that one person would   |  |
|         | sign an entire set of plans that include civil, architectural, structural, mechanical, electrical and plumbing. Please                                       |  |
|         | have each design professional sign and seal the sheets that they are responsible for.  |  |
|         | Submit signed and sealed plans for review and approval. Sec. 107.1.  |  |
|         | Submit 4 copies of the plans for review and approval. Only sets submitted. 5 sets of the civil plans are   |  |
|         | required when the project requires site plan approval.   |  |
|         | Submit one set of signed and sealed structural calculations. Design loads shall be clearly indicated on the plans  |  |
|         | in accordance with Chapter 16.   |  |
|         | Identify all proposed deferred submittals. Sec. 107.3.4.2  |  |
|         | Submit ASHRAE 90.1-07 compliance forms for building, mechanical, electrical and plumbing. Michigan   |  |
|         | Energy Code. Chapter 5 and Sec. 4.1.2.2.   |  |
|         | Provide the required soil investigation report. Sec. 1802.1  |  |
|         | Provide statement of Special Inspections. Including special inspector to be used and qualifications. Sec. 1704.1   |  |
|         | ☐ Provide a title block that includes:   |  |
|         | ☐ Type of construction. Sec. 602.1   |  |
|         | ☐ Building Use Group and Occupancy Classification of all areas. Sec. 302.1   |  |
|         | ☐ List of proposed (installed) fire protection systems. Sec. 901.1   |  |
|         | ☐ List of mixed occupancies separated/non-separated. Sec. 508.2.4  |  |
|         | ☐ Any accessory uses. Sec. 508.2   |  |
|         | ☐ Occupant loads of all areas (actual & calculated). Sec. 1004.1   |  |
|         | Provide an emergency egress plan. Sec. 107.2.3   |  |
|         | Provide wall and floor section details. Sec. 107   |  |
|         | Provide dimensions on plans in all areas. Sec. 107   |  |
|         | Provide additional foundation details. Sec. 107  |  |
|         | Provide door hardware schedule. Sec. 107   |  |
|         | Provide door, window and glazing schedule. Sec. 107  |  |
|         | The aggregate area of a mezzanine or mezzanines within a room shall not be greater than one-third of the floor   |  |
|         | area of that room or space in which they are located. Sec. 505.2.1   |  |
|         | Provide room finish schedule including floors and walls. Sec. 803.1  |  |
|         | - Decorations and trim if applicable   |  |
|         | - Plastics utilized in the design shall be in accordance with Sec. 2601.1  |  |
|         | Doors shall swing in the direction of egress. Sec. 1008.1.2.   |  |
|         | Egress shall not pass through kitchens, storage rooms, closets or spaces of similar purposes. Sec. 1014.2 (4)  |  |
|         | Door arrangement (series). Space between 2 doors in a series shall be 48-inchs minimum plus the width of the door that swings into the space. Sec. 1008.1.8. |  |
|         | ן מסטו נוומנ שאוווקט ווונט נווב שלמכב. שכני בטטטיביטי  |  |

| Provide additional information on general means of egress requirements. Sec. 1003.1   |
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| ☐ Emergency lighting. Sec. 1006.1   |
| ☐ Exit signs. Sec. 1011.1   |
| □ Location of all exits. Sec. 1020.1  |
| □ Other   |
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| Indicate door sizes. All doors including all of the dressing room doors shall have a minimum net clear opening of                                       |
| 32-inches measured when the door is in a 90-degree position. (36-inch door). Sec. 1008.1.1.   |
| Doors cannot obstruct more than 1/2 of the required width of the corridor when the door is in a 90- degree position. Door(s) shall comply. Sec. 1005.2. |
| A 12-inch by 48-inch clear maneuvering space is required on the pull-side, latch-side of all doors.   |
| Door(s) shall comply. Chapter 11 and ICC/ANSI A117.1-03 (404.2.3)   |
| Access to 2 means of egress (including stairways) is required at all times. Sec. 1021.  |
| Handrails shall comply with graspability requirements. Verify compliance. Sec. 1012.  |
| Provide a wall assembly description and/or detail for Sec. 703.2.   |
| Rated wall/ceiling assemblies. Provide the design number along with the complete assembly description for all of the rated assemblies. Sec. 703.2.      |
| Provide additional information/details on suspended ceiling system.   |
| Exposed insulation shall comply with flame-spread requirements for buildings of Type IIB construction (25 or  |
| less). Sec. 719.  |
| Provide details showing all barrier-free requirements per P.A. 1 of 1966 as amended, 2012 Michigan Building   |
| Code, and ICC/ANSI A117.1 -09:  |
| ☐ Maneuvering clearances for doors. Sec. 404.2.4  |
| ☐ Service counters. Sec. 904.1  |
| □ Work surfaces. Sec. 902.1   |
| ☐ Kitchens. Sec. 804.1  |
| ☐ Toilet and bathing rooms. Sec. 603.1  |
| ☐ Reach limitations. Sec. 308.1   |
| ☐ Changing rooms. Sec. 803.1 & 903.1  |
| ☐ Bench locations and details. Sec. 903   |
| ☐ Clear floor spaces. Sec. 304.1  |
| □ Knee to toe clearances. Sec. 305.3, 306 & 606.2   |
| ☐ Accessible routes (ramps). Sec. 405.1   |
| □ BFD Parking spaces. Sec. 501.1 & 1106.1   |
| □ Other   |
| - Other   |
| Existing Buildings – additional barrier free verifications in accordance with P.A. 1 of 1966 as amended:  |
| ☐ If the change in use group or occupancy load or alteration involves less than 50% of the floor area – apply   |
| rule 125.1352, Sec. 2, subsec. 2(A)   |
| ☐ If the change in use group or occupancy load or alteration involves more than 50% of the floor area – apply   |
| rule 125.1352. Sec. 2. subsec. 2(B)   |

| Service counters for sales or distribution of goods and services to the public shall have a minimum 36-inch long portion of the counter that is a maximum of 36-inches high above the floor. Chapter 11 and ICC/ANSI A117.1. |
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| Sec.904  |
| □ A reception desk used by people to sign-in or fill out paperwork shall also comply. Sec. 1109.12.3   |
| ☐ The cash/wrap service counter(s)/reception desk/checkout/check-in shall also comply. Sec. 1109.12.3  |
| Kitchens and kitchenettes shall be accessible. The top of the counter shall have a maximum height of 34-inches   |
| at the sink and at a 30-inch wide workspace that has knee and toe clearances. The microwave shall be located   |
| within the required reach range limitations. Chapter 11 and ICC/ANSI A117.1-03. Sec. 804   |
| Toilet rooms shall comply with Michigan Barrier Free Design Rules. The water closet shall have a minimum   |
| clearance of 60-inches measured perpendicular from the sidewall, and 59-inches minimum, measured   |
| perpendicular from the rear wall. No other fixtures or obstructions shall be within the water closet clearance.  |
| ICC/ANSI A117.1-03 Sec. 304.3.1  |
| Roof top screening is required for new equipment. Provide screening details, structural details and calculations.  |
| Provide a list of all fire-resistance rated assemblies. Provide design numbers and detail cut sections. Sec. 703.2   |
| □ Firewall Sec. 706.1  |
| □ Fire barriers Sec. 707.1   |
| □ Fire partitions. Sec. 709.1  |
| ☐ Horizontal assemblies. Sec. 712.1  |
| $\Box$ Joint systems. Sec. 714.1 – Include installation and fire test criteria (cut sheets)  |
| □ Through-penetration firestop systems. Sec. 713.1   |
| $\ \square$ Locations of all fire dampers. Provide manufacture cut sheets. Show testing in accordance with U.L. 555. Table   |
| 716.3.2.1  |
| □ Other  |
| Verify structural loading. Sec. 1603.1 & 1604.1  |
| □ Floor & roof live loads – dead loads and concentrated loads  |
| □ Ground snow load   |
| □ Basic wind speed (3 second gust), 90 mph   |
| □ Seismic design category and site class   |
| □ Wind exposure category   |
| □ Flood resistant design   |
| □ Building category importance factor  |
| □ Other  |
| The building permit application lacks required information   |
| □Owner   |
| □Contractor  |
| □Architect   |
| □Applicant   |
| □Telephone Number  |
| □Address   |
| □Email Address   |
| Projects that utilize hazardous materials as defined by Section 307.1 shall provide the following information  |
| formatted in accordance with:  |
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| □ Table 307.1(1)   |
| □ Table 307.1(2)   |
| □ Table 414.2.2  |
| □ Table 414.2.5(1)   |
| □ International Fire Code 2009 – Chapter 27  |
| □ Other  |

| oof access or roof edge shall be protected by guards installed in accordance with Section 1013. – IFC 1009.13.2 Building is classified as a Type IIB building. Door frame blocking and other uses of combustibles is limited as |
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| without NADC CO2.1.(1)  |
| outlined MBC 603.1 (1)  |
| Combustible materials shall be permitted in buildings of Type I and II construction in the following applications   |
| nd in accordance with Sections 603.1.1 through 603.1.3  |
| 1. Fire retardant treated wood shall be permitted in:   |
| 1.1 Nonbearing partitions where the required fire-resistance rating is 2 hours or less  |
| 1.2 Nonbearing exterior walls where fire-resistance rated construction is not required  |
| 1.3 Roof construction, including girders, trusses, framing & decking  |
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## **PLUMBING PLAN REVIEW**

| The plumbing code currently in effect is the Michigan Plumbing Code 2012 edition (MPC 2012).   |
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| Plans are required to be signed and sealed by a Michigan registered design professional. Section 106.3.1, 1980   |
| P.A. 299.  |
| Submit plumbing plans for review and approval. Section 106.  |
| Indicate material types and sizes (must be state approved). Section 106.3.1.   |
| Structures required at a change of direction and/or elevation change. Section 706.1 & 708.3.3.   |
| Indicate lengths between structures and type of material for storm and sanitary. Section 106.3.1.  |
| Clean outs required 100' maximum intervals. Section 708.3.1.   |
| Provide storm system riser diagram and include secondary drainage. Section 106.3.1.  |
| Provide sizes of drain, waste and vent piping. Section 106.3.1.  |
| Provide drain, waste and vent riser diagram. Section 106.3.1.  |
| Provide water riser diagram. Section 106.3.1   |
| Provide high/low drinking fountain. <b>NOTE:</b> Bottled water dispenser is approved for only 50% of the required drinking fountains. MPC Section 410. ICC/ANSI A-117-03 (602) |
| Provide mop/utility sink. Table 403.1.   |
| Based on the occupant load (greater than 15), the space is required to have 2 toilet rooms, one for men and  |
| one for women. The occupant load shall be calculated in accordance with Chapter 10 of the 2009 MBC. Section 403.2.   |
| Provide an occupant load analysis showing adequate toilet room fixture count. Section 403.1.1.   |
| Show all backflow preventers in water distribution system. Section 608.  |
| Provide oil separator detail. Detail shall show compliance with minimum design standards. Section 1003.  |
| Trap primers are required in all floor drains. Section 1002.   |
| Medical gas system must comply with NFPA 99C. Section 1202.1.  |
| Toilet rooms shall comply with Michigan Barrier Free Design Rules. The water closet shall have a minimum   |
| clearance of 60-inches measured perpendicular from the sidewall, and 59-inches minimum, measured   |
| perpendicular from the rear wall. No other fixtures or obstruction shall be within the water closet clearance.   |
| MBC Chapter 11 and ICC ANSI A-117.1-03 (304.3.1)   |
| Horizontal dry vents are subject to requirements. Section 909.2.   |
| Provide a water heater detail. Chapter 5.  |
| All floor sinks, hand sinks, three compartment sinks and floor drains that receive oil or fatty wastes shall   |
| discharge through an approved grease interceptor. Sec. 1003.3.1 thru 1003.3.5  |
| Permits and inspections are required. Section 106.   |
| OTHER:   |
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## **MECHANICAL PLAN REVIEW**

| The mechanical code currently in effect is the Michigan Mechanical Code 2012 edition (MMC 2012).   |
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| Plans are required to be signed and sealed by a Michigan registered designed professional. Section 106.3.1, 1980 PA 299.                               |
| Submit mechanical plans for review and approval. Section 106.3.1.  |
| Submit ASHRAE 90.1-07 compliance forms for building, mechanical, electrical and plumbing. Michigan Energy Code Section Chapter 5.                      |
| Provide an occupant load analysis showing adequate ventilation and outside air. Chapter 4.   |
| Provide air balance report/schedule prior to or at time of the final inspection. Section 403.7   |
| Indicate ventilation rates and show compliance. Section 403.   |
| The ventilation rates, as shown, are incorrect. Table 403.3  |
| Ventilation - Provide CFM outside air per person. Table 403.3  |
| Variable air volume systems must maintain outside air rate over the entire range of supplying rates required. Section 403.6.                           |
| Separate ventilation system required for stairway enclosures.  |
| Provide duct sizes and lengths. Section 603.   |
| Mechanical equipment shall be located in accessible area(s). Section 306.1.  |
| Duct systems that are greater than 2,000 CFM design capacity, require duct smoke detectors on the return duct system of HVAC unit. Section 606.2.1.    |
| Provide combustion air to rooms for appliances. Section 701.   |
| Provide gas piping diagram. Indicate lengths and sizes. Section 301.3.   |
| Fire dampers required when duct penetrates a fire rated assembly. Section 607.   |
| Show locations of all fire dampers in fire rated assemblies. Section 607.  |
| Provide cut-sheets on the mechanical equipment. Show the listing agency. Section 301.4.  |
| Provide permanent means of access for roof top mechanical equipment when roof is over 16 feet in height. Section 306.5.                                |
| Provide roof-top screening of all roof top equipment per City Ordinance. Submittal shall include structural drawings and calculations. MBC Chapter 16. |
| Permits and inspections are required. Section 106.   |
| OTHER:   |
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## **ELECTRICAL PLAN REVIEW**

| The electrical code currently in effect is the National Electrical Code 2014 edition (NFPA 70-14).                                |
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| Plans are required to be signed and sealed by a Michigan registered design professional. Section 106.3.1, 1980 P.A. 299.          |
| Submit electrical plans for review and approval. Section 106.   |
| Submit ASHRAE 90.1-07 compliance forms for building, electrical, mechanical & plumbing. Michigan Energy Code Chapter 5.           |
| Provide circuitry for electrical lighting and devices.  |
| Indicate overcurrent protection for   |
| Provide load schedule for   |
| Provide fault study for the coordination of overcurrent protection. NEC Article 110.10.   |
| Label electrical equipment. NEC. Article 110.16.  |
| GFCI receptacles are required in toilet rooms, kitchens and within 25 feet of roof top equipment. NEC Article 210-63 and 2108(b). |
| Electrical disconnecting means must be provided at the VAV boxes. NEC Article 430-102.  |
| Connect exit and emergency lights. NEC Article 700-12(f).   |
| Provide emergency illumination. NEC Article 700-16.   |
| Support all electrical equipment and wiring (including low voltage). NEC Articles 300-11 and Articles 725 through 830.            |
| All used electrical fixtures shall be listed for their use.   |
| All recessed fixtures shall be thermal rated.   |
| Recessed fluorescent fixtures shall have disconnecting means. NEC Article 410.73(G).  |
| Exam rooms, patient care rooms and operating rooms shall be properly wired. NEC Article 517.                                      |
| Verify existing service grounding. Repair or replace. NEC 2014  |
| Provide information on booster pumps for fire suppression systems.  |
| Show-window receptacles are required and not shown on print. NEC Article 210.62.  |
| Provide riser diagram for electrical service.   |
| Provide information on generator(s) and transfer switch(s).   |
| Provide electrical grounding system. NEC Article 250.50 through 250.52.   |
| Permits and inspections are required. Section 106   |
| Office furniture electrical assembly requires licensed electricians to perform work. Art. 605                                     |
| OTHER:  |
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